

Notice of Allowability

Application No.

10/040,378

Examiner

Lan Vinh

Applicant(s)

KOMADA, DAISUKE

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicants response filed on 3/15/2004.
2. ☒ The allowed claim(s) is/are 1,2 and 4-15.
3. ☒ The drawings filed on 09 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/040,378.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Lan Vinh
AU 1765



Allowable Subject Matter

1. Claims 1-2, 4-15 allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 9, 13, the applicants have presented a persuasive argument, see the last paragraph on page 9 of the response, filed on 3/15/2004 that the cited prior art of record fails to disclose or suggest a method of manufacturing a semiconductor device comprises the step of dry etching the insulating film by using the mask pattern as a mask and etching gas which contains C_4F_8 gas and C_xF_y gas (wherein x and y are an integer and satisfy x greater than or equal 5 and y smaller or equal $(2x-1)$ wherein the C_xF_y gas is C_5F_8 gas and the etching step is performed under a condition of $0 < P_2/(P_1 + P_2) \leq 0.5$ where P_1 is a partial pressure of the C_4F_8 and P_2 is a partial pressure of the C_5F_8 gas, in combination with the rest of the limitations of the above claims.

Regarding claims 7, 11, the applicants have presented a persuasive argument, see the first paragraph on page 11 of the response, filed on 3/15/2004 that the cited prior art of record fails to disclose or suggest a method of manufacturing a semiconductor device comprises the step of dry etching the insulating film by using the mask pattern as a mask and etching gas which contains C_4F_8 gas and C_xF_y gas (wherein x and y are an integer and satisfy x greater than or equal 5 and y smaller or equal $(2x-1)$ to form a recessed and expose the etching stopper film on a bottom of the recess/ the step of dry etching the second film by using the mask pattern as a mask and etching gas which contains C_4F_8 gas and C_xF_y gas (wherein x and y are an integer and satisfy x greater than or equal 5 and y smaller or equal $(2x-1)$), in combination with the rest of the limitations of the above claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LV
April 28, 2004